J. BENSON.

VAPOR LAMP.

No. 186,100. Patented Jan. 9, 1877.

FIG. 1.

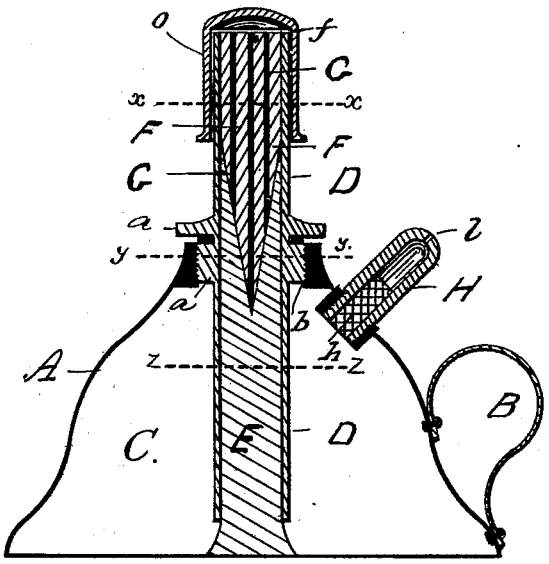

FIG. 2.

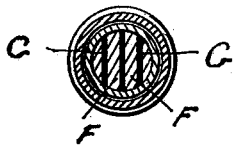

FIG. 3.

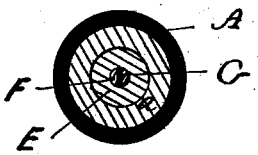

FIG. 4.

WITNESSES.

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JOSEPH BENSON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN VAPOR-LAMPS.

Specification forming part of Letters Patent No. **186,100**, dated January 9, 1877; application filed August 3, 1876.

To all whom it may concern:

Be it known that I, JOSEPH BENSON, of South Boston, in the county of Suffolk, and State of Massachusetts, have invented Improvements in Vapor-Lamps, of which the following is a specification:

This invention relates to lamps for burning naphtha or other hydrocarbon oils, and the improvement consists in the combination of asbestus, mica, and cotton wicking within the wick-tube of the lamp.

In the accompanying plate of drawings, Figure 1 is a central vertical section of my improved naphtha-lamp. Figs. 2, 3, and 4, sections on lines *x x*, *y y*, and *z z*, respectively.

In the drawings, A represents the lamp-body, having handle B, and naphtha-chamber C. D, the wick-tube secured to a screw-cap, *a*, which screws into the screw-threaded opening *b* in the top of the lamp. The wick-tube D extends down into the naphtha-chamber C nearly to its bottom. E, cotton wicking. This cotton wicking E enters the naphtha-chamber C, at the bottom of the wick-tube, and extends up into the wick-tube for a portion of its length, where it meets with a filling of asbestus, F, which continues to the burner end *f* of the wick-tube, and within this filling there are a series of upright walls or partitions of mica, G, which are separated by the filling, and end at the burning end of the wick-tube. The cotton wick E draws the naphtha up the wick-tube, the mica partitions G conduct the heat to the naphtha, and the asbestus filling allows the vapor generated from the naphtha to escape to the burning end of the wick-tube, to be there burned, and by the combination of said three elements a most perfect combustion and illuminating flame are secured. H, the vent for safety and relief of pressure of generated gases in the naphtha or chamber C.

This vent-tube is in the form of a nipple, which is screwed into the upper portion of the lamp-body, and this nipple at its inner end for a portion of its length is closely packed with wire gauze *h*, which allows the gases to pass out, but prevents the communication of flame to the inside of the lamp should the escaping gases, at the aperture *l* of the nipple, by any possibility ignite. *o* is the usual cap to wick-tube to prevent evaporation of the naphtha when the lamp is not in use.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

In a naphtha-lamp, the combination wick herein described, the same consisting of an asbestus filling, F, mica partitions G, and cotton wick E, applied within a wick-tube or casing, all substantially as described, for the purpose specified.

JOSEPH BENSON.

Witnesses:

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